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**THE COMMANDER'S ESTIMATE OF THE
SITUATION AND JOINT TARGETING:
AN INTEGRATED APPROACH**

By

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my personal views and are not necessarily endorsed by the Naval War College, the Department of the Navy, or the Office of the Secretary of Defense.

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17 May 1999

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15. Abstract: <p>This paper discusses how to integrate the joint targeting process into the commander's estimate of the situation. Though neither concept is new, joint doctrine treats them as separate processes. This divide has led to a disconnect between the two processes and problems about how to control joint targeting.</p> <p>The paper begins by describing the targeting process and analyzing some deficiencies in the current joint doctrine concerning this process. The paper then reviews an historical case study - Operation Desert Storm. This case study reveals several problems with targeting that have a direct link to the fact that targeting is often treated as distinct from the main planning process.</p> <p>Using the case study, the paper then puts forth the need for integrating the targeting process into the commander's estimate of the situation at the Joint Force Commander (JFC) level. From this logic, the paper goes on to describe how to integrate the targeting process into each step of the commander's estimate of the situation.</p> <p>Finally, the paper reaches several conclusions and advocates recommendations concerning integration of the joint targeting process. The recommendations detail where targeting should fit into the planning process, and how to control the joint targeting process to achieve synchronization among the forces under a JFC.</p>			
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Introduction

Operational targeting has been a debated topic since World War II, but it has taken on new intensity since Operation Desert Storm. The focus of the current discussion revolves around who should control the joint targeting process – the Joint Force Commander (JFC), the Joint Force Air Component Commander (JFACC), or the Joint Targeting Coordination Board (JTCB). However, the true issue runs deeper than this. The confusion over *who* should control joint targeting stems from a lack of joint doctrine about *how* to harmonize the targeting process with the JFC's planning process.¹ This paper explores a method to integrate targeting into the planning process, helping JFCs achieve a more synchronous application of operational forces.² As a case study, the paper analyzes how the lack of an integrated targeting process handicapped operations during Desert Storm. Though there are also ongoing debates concerning organizational problems related to targeting, these issues are beyond the scope of this paper. This paper focuses on *process* rather than *organizational* issues.

What is Targeting?

Targeting is "the process of selecting targets and matching the appropriate response to them, taking account of operational requirements and capabilities."³ Joint targeting is a cyclical process consisting of six steps:

1. Commander's objectives and guidance
2. Target development
3. Weaponing assessment
4. Force application
5. Execution planning/force execution
6. Combat assessment⁴

Rapid technological advances in the hardware of modern warfare require commanders and staffs to "upgrade" the way they determine how to employ available assets. A continuing trend is for combat systems to provide US servicemen with improved capabilities to detect

enemy targets and provide terminal guidance for longer-range attack mechanisms. As more systems gain the ability to find and attack enemy targets at greater distances, JFCs must understand how to integrate targeting into the planning process to maximize the efficiency and synchronization of these assets. "Targeting takes on an even more vital role in modern warfare where the variety of weapon systems and precision strike capability place tremendous demands on the targeting system."⁵

Curiously, a joint publication dedicated to the targeting process is only now in draft form.⁶ Current joint doctrine refers to the targeting process only as a supporting topic in literature dealing with other subjects. The closest thing to a final joint publication devoted to targeting is a collaborative, multiservice manual.⁷ However, neither this manual nor any of the joint publications describes where or how targeting fits into the operational planning process. This has resulted in a detachment of the targeting process from the JFC's planning process. This divide can lead to a disconnect between the targets attacked and the operational objectives.

One solution to this dilemma is to integrate the targeting process into the commander's estimate of the situation. This approach harmonizes the two processes. One can see the potential benefits of this integration by reviewing the targeting issues that arose during Desert Storm.

Operation Desert Storm

Though Operation Desert Storm was an overwhelming success, the targeting process became a major point of contention during the war. To understand this issue it is important to review how GEN Schwarzkopf (CINCCENT) organized his command for the operation. To refine the control of similar forces, General Schwarzkopf appointed LTG Horner as the Joint

Force Air Component Commander (JFACC), with the requisite authority to task all fixed-wing air assets of the coalition (except Marine close air support). To assist him with the targeting process, GEN Schwarzkopf established a Joint Targeting Coordination Board (JTCB). "The doctrinal role of this board is mainly for oversight for the Joint Force Commander. However, the first meeting of the JTCB did not occur until 10 days after offensive operations against Iraq began."⁸ Instead, GEN Schwarzkopf "met directly with the JFACC daily to discuss target priorities and specific targets. During these meetings the CINC often became personally involved in making specific changes to target selections...often pulling resources from [previously] approved Army targets."⁹

It appears that GEN Schwarzkopf did not communicate his updated targeting priorities to the Army and Marine commanders. "At this point, they watched the Air Force seemingly ignore their targeting priorities."¹⁰ Following repeated complaints from his ground commanders that the JFACC was not attacking targets necessary to reduce the Iraqi front line ground forces, GEN Schwarzkopf appointed his Deputy CINC, LTG Waller, as head of the JTCB. "From this point forward the JTCB took a more active role in the targeting process, actually directing that certain targets be included in the ATO [Air Tasking Order]."¹¹ Waller's technique to keep ground force commanders happy was to allocate air sorties about equally, giving each commander a "fair share." While this method appeased the ground commanders, it also proved an extremely inefficient use of available combat power. Iraqi units were not arrayed evenly in front of each ground force commander. Thus, as the offensive ground operations neared, GEN Schwarzkopf discovered that many Iraqi units opposing the Marines were at nearly full strength, while the enemy facing US Army units had been attrited below 50%.¹²

Another significant shortfall in operational targeting during Desert Storm was the lack of a single process. "The targeting process varied depending on which asset was involved. Airpower provided the majority of operational fires. However, SOF, long range artillery and missile fires were also available to complement the efforts of airpower."¹³ The JFACC had tasking authority over the Tomahawk Land Attack Missiles of the Navy and these were included in the ATO. However, Army long-range missile systems were not integrated as operational fires. Additionally, CINCCENT did not integrate Special Operations Forces (SOF) from the "top down" in accordance with joint doctrine.¹⁴ This resulted in SOF executing only one direct action target during Desert Storm.¹⁵

Though GEN Schwarzkopf appointed structures to assist him with targeting, there was not a clear delineation of responsibility and authority among these agencies. The CENTCOM planning staff appears to have done little in terms of targeting, delegating most of this initially to the JFACC and later to the JTCB. At the core of these impediments was *confusion about how operational targeting would be conducted and who had applicable targeting authority*. This ambiguity led to needless friction among component commanders and a loss of potential operational synergy. These issues also demonstrate that joint doctrine did not provide adequate guidance about how to harmonize targeting into the planning process at the JFC level. Though there has been a profusion of joint doctrine written since Desert Storm, none of it has addressed this issue.

The Need for an Integrated Process

The lack of an integrated targeting process during Desert Storm established obstacles to the efficient use of all available combat power. By implementing targeting decisions in direct meetings with the JFACC, CINCCENT essentially divorced his staff, other commanders, and

the JTCB from the targeting process. Because the CINC made a *de facto* decision to delegate control of the targeting process to the JFACC, targeting became dominated by the influence of one component of the targeting system – airpower. The JFACC naturally pursued a strategy with capabilities that he knew and understood, but this resulted in uncreative use of all available combat power. “Without the unifying influence of a coordinating agency at the joint force level, functional componenty results in disunifying component competition.”¹⁶

After complaints from the Army and Marine commanders, the pendulum swung too far in the other direction. Under LTG Waller, the JTCB made inefficient use of available resources in an attempt to appease the ground commanders. Under both circumstances, the problems stemmed from not integrating targeting into the JFC’s planning process. This resulted in muddled attempts to control the targeting process using inappropriate mechanisms.

Joint doctrine makes it clear that the JFC is responsible for targeting. Yet, despite the critical importance of targeting, joint doctrine provides no guidance on *how* to integrate the process. Because the JFC is the only commander with tasking authority over the diverse array of joint forces, the JFC’s staff must conduct an appropriate degree of top down targeting in order to synchronize the combat power of all forces throughout his battlespace. At the tactical level, where each commander normally operates in his own battlespace, deconfliction of forces is not a complex issue. However, at the joint operational level, subordinate commanders will likely share battlespace with a variety of air, ground, sea, special operations, information warfare, and psychological operations assets. Therefore, top down synchronization and force deconfliction takes on far greater consequence.

This paper proposes a technique for JFCs to integrate the targeting process into the existing planning process. This should result in a more efficient approach to targeting that

maintains the JFC's objectives and intent at the forefront, keeps the JFC staff focused at the appropriate level of detail, and synchronizes the effects of targeting assets.

Commander's Estimate of the Situation and the Targeting Process

The commander's estimate of the situation consists of six steps designed to consider the circumstances affecting a military situation and reach a logical decision on the best course of action to accomplish the mission. The following discussion will examine how to integrate the targeting process into each step of the commander's estimate. One should understand that the commander's estimate and targeting are both cyclical processes that must be reevaluated and updated *continuously*. This provides even greater incentive to harmonize the two processes.

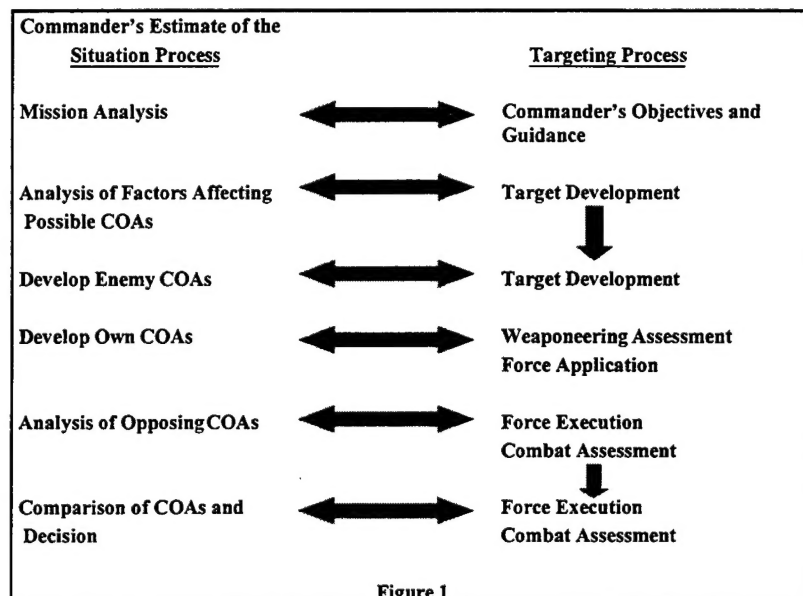


Figure 1

Mission Analysis

The purpose of the mission analysis is to ensure that the JFC and his staff have a thorough understanding of their tasks and the purpose of their assigned operation. During this step the JFC and his staff analyze all aspects of the order they have received. The end product

of the mission analysis is the formulation of clear and logical objectives, commander's intent, and planning guidance for the operation.¹⁷

The examination conducted during the mission analysis is precisely the same as the first phase of the targeting process - **commander's objectives and guidance**. The mission analysis step of the commander's estimate process and the commander's objective and guidance step of the targeting process have identical purposes – to translate assigned tasks into achievable objectives and commander's guidance. Therefore, the steps are inherently accomplished concurrently.

Analysis of Factors Affecting Possible Courses of Action

The next step of the commander's estimate analyzes the effects of time, space, and force on the operation. "The aim is to identify and tabulate strengths and weaknesses for own and enemy forces and to make an initial determination of adequacy of one's own forces."¹⁸

The second step of the targeting process – **target development**, fits ideally into this component of the commander's estimate. The goal of target development is to identify potential enemy targets and their military, economic, and political importance. To harmonize the steps of the two processes, the J2 should imagine the enemy as a system of targets, then develop a list of high value targets (HVTs). HVTs are the assets that the enemy commander must have for the successful completion of *his* mission. The loss of HVTs would seriously degrade important enemy functions and hinder the enemy commander's ability to achieve his objectives.¹⁹ While the J2 develops his Intelligence Estimate, he must determine how time and space will affect the ability of friendly forces to find and attack these HVTs. It becomes clear that as the JFC and his staff analyze factors affecting possible courses of action in terms

of time, space, and force, they are also essentially beginning the target development phase of the targeting process.

Develop Enemy Courses of Action

Based on the enemy capabilities and the factors affecting those capabilities, the staff develops various approaches that the enemy may take to achieve their objectives. The endstate of this step is a prioritized list of potential enemy courses of action. Along with these enemy concepts, the staff analyzes the vulnerabilities of each enemy course of action.²⁰

This segment of the commander's estimate is a continuation of the **target development** step of the targeting process. In fact, by thinking in terms of the targeting process, the staff has a systematic approach to help develop enemy courses of action. Based on his assessment of the enemy's objectives and the interaction of time, space, and force factors, the J2 should position the enemy HVTs to create a situation template of how the enemy might be arrayed during critical points in time. These templates are aids to help visualize the enemy courses of action. Therefore, by thinking in terms of how the enemy commander might use his available assets to achieve his objectives, the staff uses similar reasoning to develop both enemy courses of action and enemy target systems. These steps of each process are clearly overlapping and complimentary.

Develop Own Courses of Action

This step of the commander's estimate is designed to develop various friendly courses of action that will accomplish the mission. "For each COA, the commander must envisage the employment of [his] own forces and assets as a whole..."^{21, 22}

In terms of targeting, this step accomplishes two components of the targeting process—**weaponneering assessment** and **force application**. At the JFC level, the staff does not match

specific weapon systems to specific targets (as described in the targeting process). Instead, the JFC's staff must take a broader approach to this step by matching *force capabilities* to enemy *target systems* in order to achieve *desired effects*.^{23, 24} Enemy targets and appropriate attacking forces must be based on the mission, objectives, restraints, constraints, rules of engagement, commander's intent, and planning guidance as articulated in the mission analysis step of the commander's estimate. Additionally, staff planners must consider the desired effects on the target systems, the reliability of intelligence, and the risk of collateral damage.

Interestingly, the targeting process actually provides a logical approach to developing sound friendly courses of action. Based on the J2's situation templates, the JFC can view the enemy as a system of targets. This makes it simple for the JFC and J3 to visualize the enemy's center of gravity and functions/assets that protect the enemy's center of gravity. The JFC and staff then use regressive planning to develop friendly courses of action, beginning with *how* they will deliver their attack at the decisive point that achieves their objective. Most often, this will focus a direct or indirect attack on the enemy's center of gravity. This attack becomes the scheme for the *main effort*. Enemy assets that can influence action at this decisive point become the principal *high payoff targets* (HPTs). HPTs are those HVTs that friendly forces must successfully acquire and attack to allow accomplishment of the friendly commander's mission.²⁵

Next, the staff analyzes other enemy HVTs from the main effort *backward*, in order to determine the ability of these HVTs to interfere with the success of the main effort. Those HVTs that can obstruct the main effort also become HPTs. The JFC now allocates appropriate forces to attack these HPTs. Attacks on these secondary HPTs become *supporting efforts* because they have a direct affect on the successful accomplishment of the

main effort. The JFC should not waste combat power attacking HVTs that cannot influence the friendly mission accomplishment and are not related to the operational objectives.

Using a targeting approach to course of action development crafts a concept that begins with identification of the main effort, then clearly and logically ties all supporting efforts to this main effort. In this respect, thinking in terms of the targeting process helps develop a definitive main effort, clearly linked supporting efforts, and a logical sequencing to the operation.

Analysis of Opposing Courses of Action

During this step of the commander's estimate of the situation, the JFC and his staff wargame friendly courses of action against opposing enemy courses of action. There are three main goals of this analysis. Most importantly, it ensures that the JFC and his staff have a shared and common vision of how they think the courses of action will unfold. Secondly, wargaming allows the JFC to gain a clearer understanding the weak points and risks of each course of action. Finally, course of action analysis allows the JFC and staff to observe and gauge various measures of effectiveness for the courses of action.

There are two parts of the targeting process that are imbedded into the analysis of opposing courses of action. The first is the **force execution** phase. Though the forces do not actually execute their operations here, the JFC and staff *simulate* the execution of each course of action. This allows JFCs to visualize the operation and make initial, rough estimates on the second aspect of the targeting process – **combat assessment**. As the JFC and staff wargame, they determine the advantages and disadvantages of each friendly course of action. To accomplish this, the staff makes estimates of factors such as enemy battle damage assessment, friendly losses, risk of collateral damage, and time requirements. This wargaming provides a

macro-level assessment of the effectiveness and efficiency of varied attack options on enemy target systems. Therefore, by analyzing the results of each friendly course of action, the JFC and staff are also conducting a preliminary combat assessment of the *targeting* for each course of action. Hence, the two processes are inextricably linked.

During the course of action analysis step, the JFC and staff fine-tune the priority of targets and the forces best suited to acquire and attack these enemy target systems. As the JFC simulates the force execution phase of targeting and considers the combat assessment aspects, he refines the sequencing of the operation and synchronization required to achieve the desired effects. Thus, these steps of the commander's estimate process and targeting process have a mutual aim – to refine the courses of action and develop a common understanding of how each course of action might unfold.

Comparison of Own Courses of Action and The Decision

When comparing the various friendly courses of action, the JFC weighs the advantages and disadvantages of each to determine the best alternative. The measures of effectiveness normally include estimates of friendly casualties, degree of enemy target destruction, and efficiency (degree of success measured against assets expended and time required to achieve results). Comparing the friendly courses of action involves contrasting the effectiveness of diverse targeting approaches to detect and attack enemy target systems. Measuring the relative value of various targeting approaches is clearly a continuation of the **combat assessment** step of the targeting process.

Targeting Synchronization

By integrating the targeting process into the commander's estimate of the situation, the JFC selects a course of action that inherently contains macro-level targeting guidance. This

guidance assigns subordinate commanders with a sequence of appropriate *target systems* and *desired effects*. From these taskings, subordinate commanders conduct their own, more refined targeting that conforms to the JFC's directives. As subordinate commanders refine their targets, they must elevate their targeting plans back to the JFC level for deconfliction and synchronization. This final review must occur at the JFC level because only the JFC has the directive authority necessary to synchronize the time and location of target attacks and eliminate redundancy among all forces. This top down planning, achieved through a series of nested targeting concepts, then synchronized at the JFC level helps ensure that targeting remains focused on the operational objectives identified during the mission analysis.

Counter-Arguments

The most prevalent squabble with targeting at the JFC level comes from proponents of airpower – mostly the Air Force. The thrust of this argument is that the targeting process should be left to the JFACC. This contention does have several merits. First, JFC level staffs are relatively small and normally lack the expertise and staff structures necessary to conduct detailed targeting. Second, airmen have been conducting targeting for decades, and they have developed the knowledge, skills, expertise, and staff structures to conduct the process. Third, in most cases the air component will conduct the vast majority of operational fires.²⁶ Using these points, many airmen argue that it would be more logical for the JFC to delegate tasking authority of *all* targeting assets over to the JFACC rather than try to conduct any form of targeting at the JFC level.

Though this delegation of control seems logical on the surface, it would actually generate a host of command and control dilemmas. If the JFACC controlled the targeting assets for all operational fires, it would necessitate that the JFACC have some degree of

directive authority over Army missile systems, special operations forces, psychological operations, information warfare assets, and intelligence assets required for target acquisition. The potential command and control problems with this relationship are obvious. Delegating this tasking authority to a single component commander would create confusing chains of command, service friction, and the conditions for inappropriate or inefficient use of available assets. It would also have the effect of distancing the JFC's staff from the target planning.

"Unity of command means that all forces operate under a single commander with the requisite authority to direct all forces employed in pursuit of a common purpose."²⁷ Simply because one component controls the *majority* of the operational fire assets, it does not follow that they should control *all* the targeting assets. Delegating the targeting process to a subordinate commander abrogates the responsibility of the JFC, and violates the principle of unity of command.

While it is true that most JFC staffs do not have organizational structures dedicated to targeting, this author argues that the JFC level staffs do not need to be "targeteering experts." JFC staffs should initially match *major force capabilities* to *major target systems* in order to achieve *desired effects*. Attempting to mate specific acquisition and attack assets to specific targets is inappropriate at this level. If the staff requires additional expertise to assist with final deconfliction, the JFC has the option of establishing a JTCB. However, JFC staffs should clearly be at a skill level that allows them to accomplish the initial macro-level targeting, especially if they simplify the targeting process by integrating it into the commander's estimate of the situation.

Conclusions and Recommendations

Targeting requires top down planning to achieve unity of effort and synchronization. The JFC is responsible for ensuring that targeting focuses on achieving the operational objectives. Therefore, a JFC should not delegate the targeting process to a component commander. Functional/component commanders have a natural propensity to use the assets with which they are most familiar. This tendency can have two detrimental consequences. First, it can lead to unhealthy component rivalry. Second, it can result in inefficient use of available assets. Both will hinder effective synchronization of joint forces.

Achieving synchronization of joint forces often requires coordinating the effects of diverse forces within the same battlespace. As the only commander with the requisite command authority to task all components of the joint team, the JFC is in the optimum position to be the unifying influence to vector targeting toward the operational objectives. The JFC can best achieve this through top down target planning that synchronizes acquisition and attack assets across the entire battlespace.

JFCs must keep the targeting process at the appropriate macro-level, avoid over management of specific asset and target selection, and allow subordinate commanders the freedom to plan and execute within the intent of the JFC's concept. Though the JFC's staff must have some understanding of the capabilities and limitations of acquisition and attack assets, this target planning should focus on identifying the major target systems that will achieve the desired objectives, then tasking the most appropriate force components to acquire and attack these target systems. Still, to achieve synchronization and maintain unity of command, the JFC must maintain centralized control over the targeting process. He does this

by requiring subordinate commanders to submit their refined target plans to the JFC for deconfliction and synchronization with other friendly forces.

The joint targeting process must consider all components of targeting. Under these circumstances, the Joint Targeting Coordination Board (JTCB) should work directly for the JFC and not a component or functional commander. This conclusion is really an extension of the previous one. Forces that can acquire and attack enemy operational level targets include a diverse arrangement of air, land, maritime, special operations, non-lethal, and intelligence systems. This array of forces goes beyond the tasking authority of any component or functional commander. Joint doctrine makes the establishment of a JTCB optional for the JFC, but does not specify the authority or relationships of this board. Various joint pubs declare that the JTCB functions may come directly under the JFC, or the JFC may delegate this authority to a subordinate commander (e.g. JFACC).²⁸ However, if the JFC does establish a JTCB he should use it to help his staff deconflict and synchronize targeting. Establishing a JTCB under the authority of a subordinate commander will tend to pull the targeting process away from the JFC's staff, thereby establishing impediments to effective top down synchronization.

Current joint doctrine provides very little guidance on how to conduct the commander's estimate of the situation. The fact that that joint doctrine provides sparse guidance on this process is perverse since the commander's estimate is the foundation for all operational planning.²⁹ Though the Naval War College has developed one technique for conducting this process, the Army has developed a technique with some significant differences.³⁰ Joint doctrine should provide detailed guidance on how to conduct a commander's estimate of the situation so that all services have a common point of departure.

The targeting process is naturally imbedded into the commander's estimate process. The targeting process should not be divorced from the planning process at any level. As established in the discussion on the linkage between the two processes, the JFC and his staff should clearly play an important role in the targeting process while conducting the commander's estimate of the situation. Joint doctrine would provide a valuable tool to JFCs if it described how to conduct a commander's estimate of the situation, and provided guidance about how to integrate the targeting process into the commander's estimate of the situation. This would help joint staffs better understand their appropriate target planning level and would clearly harmonize the targeting process toward achieving the JFC's operational objectives.

ENDNOTES

¹ For the purposes of this paper the Joint Force Commander (JFC) refers to a Commander in Chief of a unified combatant command or Joint Task Force (JTF) commander who commands forces from multiple services, with multiple functions (air, ground, maritime, special operations forces). Though they may command forces from multiple services, I do not include single-function commanders, such as a Joint Force Air Component Commander (JFACC), Joint Force Land Component Commander (JFLCC), or Joint Force Maritime Component Commander (JFMCC) under the term JFC.

² Richard P. McEvoy, "Targeting for the Maneuver Task Force," *Infantry*, November – December 1996, 12 – 14. Though this paper greatly expands the topic into the joint and operational levels, the original concept for this paper came from a previous article that I wrote. Although the joint targeting process was designed for the application of joint operational fires, it can have a much broader application. The targeting process is a way of organizing one's thoughts about how to apply all types of military force, including maneuver forces, to achieve desired objectives.

³ Joint Chiefs of Staff, DOD Dictionary of Military and Associated Terms (Joint Pub 1-02), <http://www.dtic.mil/doctrine/jel/doddic.htm> May 1999. Hereafter referred to as Joint Pub 1-02.

⁴ Joint Chiefs of Staff, Doctrine for Joint Fire Support (Joint Pub 3-09) (Washington, D.C.: 12 May 1998), III-3.

⁵ Jonathan B. Hunter, "Joint Operational Targeting: Who's in Charge; CINC, JFACC, or JTCB?" (Unpublished Research Paper, School of Advanced Military Studies, United States Army Command and General Staff College, Fort Leavenworth, Kansas: 6 May 1994), 1.

⁶ Joint Chiefs of Staff, Doctrine for Joint Targeting (Joint Pub 3-60) (Washington, D.C.: 15 April 1999). Joint Pub 3-60 is currently out for comments in its second draft from.

⁷ Air Land Sea Application Center. Targeting: The Joint Targeting Process and Procedures for Targeting Time-Critical Targets (FM 90-36, MCRP 3-16.1F, NWP 2-01.11, AFJPAM 10-225) (Langley AFB: 25 July 1997).

⁸ Hunter, 31.

⁹ Hunter, 31-32.

¹⁰ Charles W. Johnson, "Joint Targeting and the Joint Targeting Coordination Board: Let's Fix the Current Doctrine!" (Unpublished Research Paper, School of Advanced Military Studies, United States Army Command and General Staff College, Fort Leavenworth, Kansas: 23 May 1996), 30.

¹¹ Hunter, 32.

¹² Michael R. Moeller, "The Sum of Their Fears: The Relationship Between the Joint Targeting Coordination Board and the Joint Force Commander." (Unpublished Research Paper, School of Advanced Airpower Studies, Air University, Maxwell Air Force Base, Alabama: August 1995), 15.

¹³ Hunter, 26-27.

¹⁴ Joint Chiefs of Staff, Joint Special Operations Targeting and Mission Planning Procedures (Joint Pub 3-05.5) (Washington, D.C.: 10 August 1993)

¹⁵ Hunter, 33-35.

¹⁶ William R. Fearn, "Joint Force Fires Coordination: Towards a Joint Force Answer," (Unpublished Research Paper, Naval War College, Newport, RI: 13 June 1997), 14.

¹⁷ Naval War College, Commander's Estimate of the Situation (NWC 4111C) (Newport, RI: September 1998), 1-1. Hereafter referred to as NWC 4111C.

¹⁸ NWC 4111C, 2-1.

¹⁹ Joint Pub 1-02.

²⁰ NWC 4111C, 3-1.

²¹ NWC 4111C, 4-1.

²² Command and General Staff College, Command and Staff Decision Processes (Student Text 101-5) (Fort Leavenworth, KS: February 1995). Hereafter referred to as CGSC 101-5. There are significant differences between NWC 4111C's approach to Developing Own Courses of Action (COAs) and the same step from CGSC 101-5. NWC 4111C professes that the staff must develop friendly COAs that will achieve the desired objectives, *without* regard to the enemy COAs. CGSC 101-5 adheres to developing friendly COAs against specific enemy COAs. The NWC 4111C method provides a more "artistic" approach to developing a wide array of COAs to accomplish the objectives. The CGSC 101-5 method involves a more "scientific" approach, matching friendly and enemy combat power at decisive points (the NWC 4111C process saves this combat power analysis for the Analysis of COAs step). While both techniques have their respective advantages and disadvantages, I chose to

describe this step more closely adhering to that described in CGSC 101-5 because it is my experience that this matches more closely to the way that joint staffs really conduct this step.

²³ Joint Chiefs of Staff, Doctrine for Reconnaissance, Surveillance, and Target Acquisition Support for Joint Operations (Joint Pub 3-55) (Washington, D.C.: 14 April 1993), IV-3. A target system is all targets situated in a particular geographic area that are functionally related.

²⁴ Joint Chiefs of Staff, Doctrine for Joint Interdiction Operations (Joint Pub 3-03) (Washington, D.C.: 10 April 1997), v-vi; and Joint Pub 3-09; and NWC 4111C, 1-10. Various publications discuss two aspects to the effects on the enemy. The first is *desired effect*. This refers to the effect that the attack will have on the enemy and is expressed in terms of *divert, disrupt, delay, or destroy*. Other manuals discuss the degree of damage to an enemy force and express this in terms of *neutralize, destroy, or annihilate*. The draft Joint Pub 3-60 defines nine terms that describe the effects of target attacks: *disrupt, delay, divert, destroy, deny, suppress, neutralize, enhance, and protect*.

²⁵ Joint Pub 1-02.

²⁶ Hunter, 42. Additionally, in written comments he provided on this paper, USAF COL Phillip S. Meilinger (Naval War College Strategy and Policy Department) suggested that targeting might be better left to airmen and it might be more logical to delegate tasking authority of all targeting assets over to the JFACC.

²⁷ Joint Chiefs of Staff, Doctrine for Joint Operations (Joint Pub 3-0) (Washington D.C.: 1 February 1995), A-2. Though joint doctrine states that unity of effort can be achieved through coordination and cooperation, this is normally second choice to unity of command that comes from a clear and simple chain of command.

²⁸ Joint Pub 3-03, III-1 and Joint Chiefs of Staff, Command and Control for Joint Air Operations (Joint Pub 3-56.1) (Washington, D.C.: 14 November 1994), IV-2.

²⁹ Joint Chiefs of Staff, Joint Task force Planning Guidance and Procedures (Joint Pub 5-00.2) (Washington, D.C.: 13 January 1999), IX-39 – IX-53. The latest version of this pub provides broad guidance on the steps of the commander's estimate of the situation process, but does not provide much in the way of how to accomplish the steps.

³⁰ NWC 4111C and CGSC 101-5. Besides the differences noted in the endnote 22 above, NWC 4111C has an additional step compared to CGSC 101-5. Step two in NWC 4111C (Analysis of Factors Affecting Possible COAs) is incorporated into the first step (Mission Analysis) according to CGSC 101-5.

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